

# EUROPEAN PATENT OFFICE

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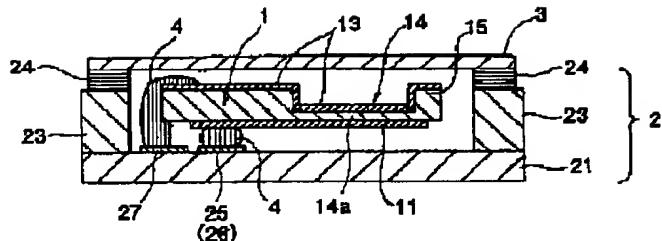
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APPLICANT : TOYO COMMUN EQUIP CO LTD;

INVENTOR : IWATA KOICHI;

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TITLE : PACKAGE OF SURFACE  
 MOUNTING-TYPE PIEZOELECTRIC  
 DEVICE



**ABSTRACT :** PROBLEM TO BE SOLVED: To make a package small in size, to prevent conductive defect owing to ultrasonic wave cleaning and to keep a frequency temp. characteristic by connecting an electrode formed on the other surface of a piezo-electric element to another internal terminal on a package inner base surface through the use of a conductive adhesive resin.

SOLUTION: It is preferable that the electrode formed on the other surface of the piezo-electric element is connected to a seam ring which is positioned on the inner side surface of the package through the use of the conductive adhesive. A crystal substrate 1 is arranged so as to permit a surface where the division electrode 11 is formed in the crystal substrate 1 to be opposed to the upper surface of the substrate 21 and the division electrode 11 is electrically and mechanically connected to input/output lands 25 and 26 respectively by the conductive adhesive 4. A shared electrode 13 on the other main surface of the crystal substrate 1 is connected to an earth land 27 positioned just under its one end edge by the conductive adhesive 4. When the silicon-based adhesive with low hardness, for example, is used for at least two position among the three positions where conductive adhesive 4 is used, the frequency temp. characteristic of an <AT cut crystal substrate is kept.

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